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# MARKETING ACTIVITIES



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# Milk Movement Restrictions Studied

By Margaret R. Purcell

If existing regulations were modified to permit milk to move freely, prices to a fourth of the market milk producers in the United States would probably decline an average of 48 cents per hundred pounds of milk for fluid use, according to a report just released by the U. S. Department of Agriculture. In some markets, the report says, declines would range up to 75 cents and \$1 per hundred pounds.

Reduction in prices paid to milk producers, if reflected in retail milk prices in those markets affected by regulation, would save consumers an average of 1 cent a quart on their milk purchases. In some cities their savings would be as much as 2 cents a quart.

The report concludes, however, that although increased milk consumption resulting from price reduction would partially offset the decline in producer prices, consumption would increase proportionately less than the decline in price.

## Dairy Products Piling Up

Stocks of dairy products have been piling up in recent years largely because more milk has been produced than consumers have been willing to buy at supported prices. Governmental agencies on all levels have sought ways to reduce marketing costs and to stimulate demand. There has been concern, however, that certain regulations and controls over the dairy industry were tending to inhibit progress.

In response to a need for broad-scale, authoritative information on the problem, the Marketing Research Division, Agricultural Marketing Service, undertook to determine whether, and to what extent, regulation tends to interfere with the free movement of milk or with the adoption of less costly marketing practices. Measurement of the effect of regulation on the price of milk was also an objective.

## Method of Study

To gather as much dependable information as possible within the time available, primary data were obtained by means of personal interviews and mail questionnaires.

A total of 138 personal interviews was conducted with dairy industry representatives and milk control officials in 40 cities widely scattered

about the country. Information was obtained from them about regulations which limited their areas of distribution or their choice of processing, pricing, and distribution methods.

Milk prices in 160 cities were studied to obtain leads as to where unusually restrictive regulations were likely to be found. Selected cities were visited to learn the extent to which regulation appeared to account for or to protect the existing price differential.

Full-time health officers in charge of local health units with jurisdiction over urban places of 25,000 population or more were surveyed by mail for information about restrictive sanitary regulations and policies of reciprocity.

In addition, numerous published reports were reviewed and milk prices over a period of years were analyzed.

### What the Regulations Are

Regulations generally recognized as tending to restrict the movement of milk are those concerned with the sanitation of the milk supply, the fixing of prices, and the operations of milk truckers. Of the 47 billion pounds of fluid milk consumed by the nonfarm population of the United States in 1954, the pricing of about 12 billion pounds is estimated to have been unduly affected by regulation.

Those regulations tending to restrict the merchandising of milk are those which control distribution methods and marketing practices.

### Sanitary Regulations

Under their police powers, the States and many local governments enforce rules and regulations to ensure that their milk supplies are pure and wholesome. Some such regulation is desirable in the public interest. The movement of some milk may be restricted, however, because both the number and types of regulation, and the degree of enforcement vary widely among different jurisdictions.

Because of the way they are interpreted, regulations may be enforced in a discriminatory manner. Some jurisdictions forbid the distribution of milk pasteurized at a plant beyond the limits of the city in which it is to be sold. Several cities prohibit the entry of milk produced beyond certain fixed limits. Others insist upon making their own inspections, but may delay or refuse to inspect, and may levy excessive fees for the inspection service. And some jurisdictions reportedly refuse to accept milk produced or handled under the supervision of other jurisdictions whose requirements are substantially equal, although they differ in details of little public health significance.

Data collected by the AMS investigation gave evidence that certain sanitary regulations or their enforcement obstruct the movement of milk into a substantial number of cities. In a majority of the cities, however, sanitary requirements seem to be consistent with requirements

generally regarded as essential. Hence, in these cities regulations are either not considered unduly restrictive, or they do not operate so as to force milk prices out of line with those at potential supply sources.

Many of the motives for making sanitary regulations restrictive are still at work. Between 1945 and 1954, however, restrictions repealed or successfully challenged in the courts appear to have outnumbered by about 2 to 1 those upheld or newly enacted. Expansion of distribution areas has of necessity brought about some reduction in the number of obstacles to the movement of milk. The National Conference on Interstate Milk Shipments is working to correct conditions that have restricted milk movement. And the professional qualifications of local milk sanitarians appear to be rising.

### State Control of Producer Prices

At the time the AMS report was written, milk control laws were in operation in 16 States. All authorized the fixing of prices paid to milk producers. Such price-fixing authority is estimated to affect 20 billion pounds of milk annually.

Because most States tend to establish prices which will be advantageous to their own producers, prices for some markets may be higher than necessary to bring forth an adequate supply of milk. Outside milk may, therefore, tend to move in. But the power of the States to fix producer prices stops at their borders. Hence, because the movement of out-of-State milk cannot be restricted by controlling prices paid to producers, the States may resort to various expedients. In some instances the administration of sanitary, licensing, or other laws is coordinated with price control programs, which thereby take on restrictive aspects.

### Regulation by Federal Order

Altogether 54 markets in the United States were regulated by Federal milk marketing orders at the time the report was written. These orders are issued by the Secretary of Agriculture after hearings and after approval by producers of milk for the market. Among other things, the orders establish the minimum price which dealers in a regulated market must pay to producers for each class of milk according to use.

Federal orders have attempted to avoid requirements which might impede the movement of milk unduly. Some restriction on the flow of milk is however inherent in regulation if minimum prices are to be established. In addition, Federal order provisions for compensation payments, pool plant requirements, and transportation differentials may be so written as to be unduly restrictive.

Most Federal orders permit the entry of unpriced or partly regulated milk. Unpriced milk could displace regulated milk if it were wholly free of restraint. To avoid this contingency, orders contain two types of measures which are intended to prevent unpriced milk from having an competitive advantage over pool milk. These are the allocation and compensatory payment requirements. Location differentials markedly in-

fluence the movement of milk if they differ materially from transportation costs.

### Regulation of Truck Transport

Milk is transported largely by truck, particularly those emergency supplies which move long distances. All States and the District of Columbia impose size and weight limitations on motortrucks operating within their borders. There is, however, little uniformity among the limits prescribed. Because of differences in size and load maximums allowed by those States which lie across the most direct hauling routes, the movement of bulk milk particularly tends to be restricted. Hence, it is frequently necessary for an interstate trucker to maintain a wide variety of equipment in order to carry a full load in each of the States through which he must pass. Trucking costs may reflect these factors.

Various State taxes and fees on motortruck operation doubtless influence the rates charged by milk transport companies. Interviews with dairy company officials, however, did not disclose that either size and weight limitations or taxes affect milk movement unduly.

### Regulation of Merchandising Practices

Significant changes in dairy marketing methods have come about in recent years. Daily delivery of milk to homes has given way to less frequent delivery. An increasing proportion of milk is being sold through retail stores. Use of paper containers, and sales of milk in half-gallon and gallon containers are becoming more common. Discounts for quantity purchases and differentials for service are sometimes given. And machines for dispensing milk at retail are coming into use in some areas.

Acceptance of these and other innovations has not, however, been general. In some instances the need to provide for them was not foreseen when local regulations were enacted. In others they have not been considered to be in the public interest. And various market interests opposed to them have sought to curb or prevent them by means of statute or ordinance.

Regulation of resale (consumer and wholesale) prices is authorized in 11 States. Power to establish resale prices and to allow differentials for type of product, container, or service permits the control agency to favor or to discourage one or another method of merchandising. Moreover, State regulation of trade practices, while necessary to make price regulation effective, tends to curb some effort toward introduction of modernized selling methods.

Because data were not considered adequate, no quantitative estimate was made of the effects which restrictions on marketing practices might have on either the price or the consumption of milk.

### Removal of Restrictions Difficult

It is difficult to scale regulation to accomplish worthy objectives

without burdening some segment of the milk industry unduly. To remove regulations, once they have been established, is equally difficult. Many separate jurisdictions are involved in the regulatory process. Some individuals or groups perennially press for trade advantages. There is little agreement as to what standards or requirements would bring about desired results. And prices paid to milk producers have never been stable.

#### Modification Would Have Moderate Effect

In estimating the effects which regulation of movement would have on milk prices, it was assumed that if milk moved freely, prices among markets would differ by little more than the cost of transportation to each market.

The relationship between dealers' buying prices for milk for fluid use, and the distance from areas where surplus supplies were available for movement, therefore, were calculated. On this basis, prices were found to increase 1.92 cents per hundred pounds for each 10 miles of distance from a Midwest base point. This increase was comparable to rates quoted by several large milk trucking companies. A number of large cities where producer prices were substantially above the average were visited to determine the extent to which the price difference was explained by the existence of local regulations. One or more of several conditions were found to account for the difference in price. An estimate was then made, on the expanded base, of price adjustments which might be expected if regulations were modified.

Part of the difference in price in some markets was, however, explained by conditions unlikely to be affected by any change in regulation -- for example, because of unfavorable production conditions in the supply area; because the market was relatively small; because of differences in the services performed by producers' cooperatives; and because of competitive features in the market.

On the basis of all of the facts developed from the study, it was concluded that modification of economic and sanitary regulations affecting the movement of milk would lessen price differences among markets. Hence, the incentive for interregional movements of milk would be greatly reduced.

#### Small Increase In Fluid Milk Consumption

As already noted, however, modification would be likely to result in some adjustments in price levels in those markets which supply about a quarter of all the fluid milk consumed by the nonfarm population. If these reductions were passed on to consumers, a relatively small increase in fluid milk consumption might be expected -- an estimated increase of about a quarter billion pounds.

The study shows further that modification of regulations would have little initial effect on supply. As producers adjusted output to price, substantial supply changes might appear in certain areas, but for the country as a whole, the change would probably be small.

# Handling Equipment For Retailing Melons



By Paul Shaffer and Dale Anderson

An inexpensive piece of equipment, which retail food store operators can purchase or have made, will save them up to 75 percent of current labor costs in the handling and displaying of watermelons. It is a collapsible rack, designed to be used on a semi-live skid, which will handle 50 watermelons at a time and has other potential uses in store handling and display operations.

Modern food retailing through self-service markets consists of a series of materials-handling operations from receipt of the merchandise at the store through checkout by the cashier. This is especially true in the case of watermelons. In-store tests of the new equipment revealed that the amount of labor required to handle watermelons from the delivery area through to display can be reduced as much as 10.7 man-hours per 1,000 melons when the rack and improved handling methods are used.

In a study of watermelon handling in retail stores, four types of materials-handling equipment were evaluated. (See table at end.) In each instance, the watermelons were unloaded outside the produce receiving door by delivery personnel. Except where the collapsible rack was used, the melons were stacked on the ground. On the average, there were 50 melons, of between 20 and 30 pounds, in each delivery. When possible, the melons were hauled directly to the display area.

In one commonly used method, "baskarts" were used to haul the melons either to display or to the back room storage area. (Fig. 1.) The baskart has a capacity of seven melons. In another typical handling method, lettuce or carrot crates were loaded on a platform-type stocking truck and filled with melons. (Fig. 2.) Two crates on the truck held, on the average, 13 melons. Some stores used 30- by 60-inch semilive skids for produce receiving and storage. Three crates placed on this type skid held approximately 21 melons. In each of the three methods described, the carrier was used only to transport the melons to display or storage.

To reduce the number of handlings and to increase the number of melons hauled per trip, a collapsible rack was designed which would fit on the semilive skids and which could also be used for displaying the



Figure 1.



Figure 2.

watermelons. (Fig. 3.) This rack has an approximate capacity of 50 melons. When used for display, grass mats were draped over each side. (Fig. 4.) Since the rack is collapsible, little space is required for storage. It also can be used for bulk displays or for displaying potatoes and onions. When built in lots of 50 to 100, the cost is about \$7.00 per rack. Construction details for the rack are available.

One firm studied uses a combination pallet and rack. This reduces handling to a minimum -- the melons are not handled from the time they are loaded in the racks at the warehouse until they are sold. However, the stores must have truck-bed height loading docks, unloading pits, or a forklift truck at the store in order to use this rack.

#### Labor Costs For The Receiving And Display of Watermelons.

<u>Method</u>	<u>Man-hours per 1,000 melons</u>
Baskart	13.6
Stocking truck	11.2
Semilive skid with crates	7.9
Semilive skid with collapsible rack	4.0
Semilive skids with collapsible rack (used for display)	2.9



Figure 3.



Figure 4.

# Sugarcane Sirup; Fading Farm Enterprise

By F. J. Poats

Is sugarcane sirup, the companion of hot biscuits and waffles, and an ingredient of Southern candy, destined to join the cracker barrel, the coffee mill, and other memories of bygone days? This might seem to be true from some of the current statistics on its production and sale, but recent marketing research and service work of the U. S. Department of Agriculture indicate some hope for the future of this product of the Deep South.

A study of the industry's problems by the Marketing Organization and Costs Branch of the Agricultural Marketing Service indicates that an improved product and marked changes in marketing might halt the steady decline in demand for the product and stabilize production at current levels. Meanwhile, sugarcane sirup producers can take heart from successful marketing service work that is being done for a closely related product with similar marketing problems - Kentucky sorghum sirup.

## Industry History

Production of 19.7 million gallons of sugarcane sirup in 1929, with a farm value of 14.1 million dollars, declined to 5.7 million gallons in 1953, with a farm value of 6.4 million dollars. The product enjoyed a brisk, but brief improvement in demand during World War II when sugar was rationed, but quite evidently as a substitute for sugar. This increased demand was principally from industrial sugar users, not from the individual consumers who had supported the higher level of production and use during the earlier decades.

Sugarcane sirup is made by evaporation and filtration of sugarcane juice. It retains all of the sugar of the juice, and has a distinct molasses flavor and a light to dark amber color. It is produced for home use and commercial sale in nine Southern States, with the greatest concentration of producers in Louisiana. The industry has been the source of significant cash income in some areas, at one time being second to cotton among cash crops in the South.

The causes of decline in sugarcane sirup production are many and varied. A survey of sirup producers, assemblers, and marketers made in 1952, indicated some of the problems and conditions which had been or would be conducive to a decline in production and sales:

- (1) The sirup reaching consumers was not uniform in quality. The

basic reason for this is that the sirup is produced by many farm mills without rigid standards. Consumers expect uniformity of quality within a specific range of price even though the product may be from different producers or made at different times.

(2) Marketing of sirup is mostly confined to small areas adjacent to the points of production. There is not a universally recognized standard of sugarcane sirup on the market. Outside of the South, the product is little known.

(3) Producers who would sell for commercial packing and blending are limited in choice of outlets, frequently to a single buyer who obtains sirup from their area.

(4) Similar-use products, such as blended sirups, backed by national advertising and a strong marketing organization, compete with sugarcane sirup for acceptance of consumers.

(5) It is the practice of many producers, who sell directly to consumers, to put a substantial portion, if not all, of their sirup in No. 10 or No. 5 tin cans or pails. These containers will not attract the unfamiliar to try the product, are not good sizes for trial, nor will they allow examination for color or clarity until they are opened.

(6) Sugarcane for sirup in most instances is a minor cash crop. The major cash crops come first in labor utilization, then sugarcane, if any time is left for its care. Lower net returns from sugarcane sirup have been directly associated with poor production practices, improper harvesting, and lack of quality maintenance in the sirup making process. Whether cause or result, these things mark it as a less attractive farm enterprise.

(7) Sugarcane sirup producers generally appear to be unaware of the specific costs of the enterprise. In order to improve efficiency, the costs of each phase, such as production of cane, processing, packaging, and marketing need to be known and analyzed as the first step toward their reduction and control.

#### Better Marketing Needed

The solution to these problems and conditions is not easy or certain. It is apparent, however, that some form of group processing and marketing could be advantageous. Processing, packaging, and marketing through a cooperative agency or association, would offer better opportunity to control the quality of product, and lots of each quality could be segregated for sale to different market outlets or uses. Volume of sirup moving through an association would be sufficient for widespread sale of a single brand, or small group of brands each denoting a separate quality and price range. Many of the operations presently handled by individual cane producers and processors, such as filtration, bottling, labeling, and selling could be handled by the association. Broader market coverage could be obtained through association efforts. Costs of these services could be defrayed by a fixed fee per gallon of sirup, or by some other tolling arrangement, as in the cooperative marketing of other products.

(These recommendations for sugarcane sirup coincide to a large extent with marketing service work being done on a smaller scale by the Kentucky Division of Markets under the "matched-fund" provisions of the Agricultural Marketing Act for sorghum sirup producers in one area of that State. An experienced representative of the Division was stationed in the producing area to assist farmers in harvesting and cooking their cane and to advise the centralized plant handling the sirup on processing, blending, packaging, and labeling the product. He also assisted in establishing new outlets and helped in promotional campaigns for the product. A leaflet prepared by the Division of Markets, accompanied by a request for suggestions on improving the sirup, was sent to several hundred prospective buyers. Not only were a number of suggestions received, but also many prospective orders for sirup. As a result of this service work, the Division estimated that probably 30 to 40 thousand dollars of additional sorghum sirup income would be received in the two-county producing area in 1954.--Editor)

### Other Problems in Sugarcane Areas

Although the volume of sugarcane marketed is down radically, the sirup price has failed to rise to the extent of several of the farm commodities with which it competes for land, labor, and capital. Observations in sugarcane areas indicate that truck crops, beef, milk, and poultry have replaced sugarcane sirup. Sugarcane sirup prices have also lagged behind prices of cotton, tobacco, peanuts, and sweet potatoes; and the price index for the period since 1947 is below the index for all commodities in the area. Local industry has removed, or raised the cost of, off-the-farm labor which is necessary in the harvesting operation for sugarcane.

Statistics on similar-use products, including sugarcane sirup, sorgo (sorghum sirup), maple sirup, refiners sirup, corn sirup, edible molasses, honey, blended sirups, and fruit spreads indicate a decline in use of most of the "straight" products in favor of the blended sirups and fruit spreads. Blended sirups are usually a combination of one of the "straight" sirups with a simple sirup made from sugar or dextrose. They are usually mild in flavor, lighter in color, and lower in price than the individual sirups. Fruit spreads offer a wider range of flavors and uses than the sirups and are consumed at a rate only slightly (14 percent) less than the combined rate of consumption for all sirups consumed "straight" or blended.

### Opportunities for Improvements

Description of the situation makes it clear that there is little hope for a return of the market for sirup to the level of the 1920's, although there is ample room for marketing a crop at least equal to present production. Opportunities for profit appear to lie more in the direction of better yielding varieties of sugarcane; reducing costs of harvesting; more attention to product quality and uniformity in line with consumer preferences; and cooperative or other group processing and marketing efforts to improve the competitive position of sugarcane sirup. Without these steps, further declines are indicated.

# Rice Industry Staging Fall Marketing Campaign

By Philip Fleming

Whether your interest in it is as a food, or as a crop, rice is important. From the first standpoint, rice is the basic item of diet for more people throughout the world than any other food crop. From the other standpoint, rice growing in this country has reached the stature of a major farm enterprise.

With the industry swelled to such size, its leaders have undertaken a marketing program to match their production efforts. All of the many groups concerned with growing and distributing rice have joined together to sponsor a rice consumption campaign this fall -- with the peak of the effort scheduled for the period from September 29 to October 8.

## USDA Supporting Campaign

Because of the importance of rice in the Nation's agriculture, and because of the plentiful supply in prospect, the U. S. Department of Agriculture has endorsed the industry's campaign -- and will give it full assistance with a Special Plentiful Foods Program during that September 29 - October 8 period.

Rice growing in this country has mirrored the troubled world conditions of recent years, reflecting the strategic importance of this food grain throughout the world. Our ability to increase rice production for distribution to our friends abroad has been an important weapon in our fight for freedom.

Twenty years ago, rice production here amounted to only 18 million hundredweight each year; when World War II started, the total was still less than 25 million. Then, throughout that war, in the reconstruction years, and through the fighting in the East, rice production was boosted sharply in this country. Last year, it reached a record of nearly 59 million of the 100-pound bags of rough rice.

That production had a value of \$268,328,000 -- a substantial share of farm income in the areas where it is grown. Those areas are principally in California, and in four southern States -- Mississippi, Arkansas, Louisiana, and Texas.

With the lessening of tensions in Asia, the rice industry -- which had been concerned mainly with boosting production to meet the world's scarcity -- found marketing to be a problem demanding primary concern.

As the new crop year began last August, a carryover of 7.6 million hundredweight remained from the large 1953 crop. And indications are that the carryover of August 1 this year will be nearly twice that large, setting another new record.

This situation change necessitated some reappraisal and readjustment.

As one measure, a program of acreage allotments and marketing quotas has been put into effect this year. Growers have cut acreages by one-fourth. This year's rice crop is estimated (on the basis of July 1 conditions) to total 47,214,000 hundredweight -- the smallest since 1951.

But many leaders in the rice industry believe that -- rather than to seek a balance between supply and demand entirely by curtailing production -- efforts should be made to boost consumption here. While export markets continue good, they also see attractive possibilities in the markets in this country.

Rice consumption here has been increased continually, but only as population has increased. Last year, rice use for food climbed to a new record high of 18,300,000 hundredweight. But over the years when scarcity has existed in world markets, the effort to keep American consumers sold on rice has not been aggressive. And traditional rice-consumption habits have varied little. The national average of 5.3 pounds of milled rice per person, in 1954, covers ranges all the way from liberal use of rice in production areas, through modest use in many sections, to sparse use in some areas of the country.

But now, rice growers and their associations, millers and distributors have come together to develop a vigorous coordinated campaign, to realize the full potential for rice in domestic markets -- to gain for it here some of the importance it holds in world markets.

The industry's individual advertising and promotion efforts have been scheduled to complement each other through the fall, to put the emphasis on moving more rice. Regular brand-name advertising will be budgeted to focus attention on rice during the promotion period. In addition, the industry has developed extensive and attractive point-of-purchase merchandising materials to be distributed throughout the food trades.

The U. S. Department of Agriculture is cooperating closely with the industry in developing and carrying out its campaign.

Food tradesmen for the Department's Agricultural Marketing Service, stationed in major markets throughout the country, are helping secure cooperation of food distributors in the campaign. In addition, Department information and educational services are helping secure the cooperation of food editors for newspapers and magazines, radio and television, and the help of other media in carrying the rice message to consumers.

The rice industry leaders look to this marketing campaign to win new recognition for rice in the American diet, and appropriate appreciation for it as an easy-to-use, versatile, and economical food.

# Winter Pear Retailing

By Hugh M. Smith, Wendell E. Clement, and William S. Hoofnagle

More profitable retail sales of large and small-sized winter pears were accomplished through experimental merchandising methods tested in retail food stores in Pittsburgh, Pa., during the course of recent research by the U. S. Department of Agriculture.

The study, made in cooperation with the Pennsylvania Agricultural Experiment Station, the western winter pear industry, and a chain store organization, revealed that a combination of different sized pears in bulk and packaged displays, with certain numbers of fruit of different sizes to a package, helped boost sales. The research was directed by the Market Development Branch of the Agricultural Marketing Service.

Winter pears are an extremely important crop to producers in the Pacific Coast States of California, Oregon, and Washington. During 1954, these three States accounted for approximately 87 percent of all pears produced in the United States, or 26.4 million bushels. Of this latter figure, nearly 6 million bushels were winter pears.

Anjou, Bosc, Comice, and Winter Nelice are the major pear varieties produced on the West Coast. The fruit usually is on the domestic market from October through May of the following year. Major marketing outlets for winter pears include retail stores, processors, and exports. Prior to World War II, well over a third of the total winter pear production moved into the export market. However, only about 10 percent of the production has moved through this outlet since 1950. This decline in exports, increased production, growth of winter pears in importance as a domestic fruit, and a specialized marketing system have caused producers and industry groups to place greater reliance upon retailers in moving larger quantities of pears to consumers in recent years.

Producers of winter pears have met with some difficulty in moving large and small pears through retail outlets. Historically, many retailers have offered consumers only medium-sized winter pears: mostly because they had no information of the extent to which consumers would purchase the smaller and larger sizes of the fruit. (In the study, medium pears were those packed 150 to a box; large-sized, 80 and 90 to a box; and small, 165 and 180 to a box.)

## Objectives of Study

One of the major points of the Pittsburgh study was to measure and evaluate consumer acceptability of large and small size pears when they were offered in combination with medium-sized pears so as to provide the

retail trade and producers with definite information as to the sizes of pears consumers would buy if they were made available in retail outlets. Other objectives were to determine the combination of size and number of winter pears in a package which would induce larger purchases; to ascertain the relationship in consumer purchases between bulk and packaged pears when offered in combination; and to select the combination of factors which would appear to provide the better merchandising program for winter pears in retail stores.

### Volume of Sales

In the study, four methods of merchandising pears were developed and tested. The effectiveness of each of the four selling methods was based on total sales by that particular method in a 4-week retail store experiment (Table 1, below). Each method differed from the other either in size of the pears or the number of pears to a package. Pears were retailed at the same price per pound regardless of size of the pears or whether in bulk or packaged.

Of the merchandising methods tested, the findings indicated that more pears were sold when the display consisted of medium-sized pears in bulk and in a package of 6, in combination with large pears in bulk and in packages of 3, 4, 6, and 8 (Method D, table 1). The method of displaying medium and large sizes in combination sold 32 percent more pears than the method of displaying medium and small sizes in combination. Furthermore, the display of medium and large sizes in combination resulted in a 26 percent increase in sales over the method of displaying medium size pears alone in bulk and in a package of 6.

Table 1.--Quantity of winter pears sold by specified methods in 12 food chain stores, Pittsburgh, Pa. 1/

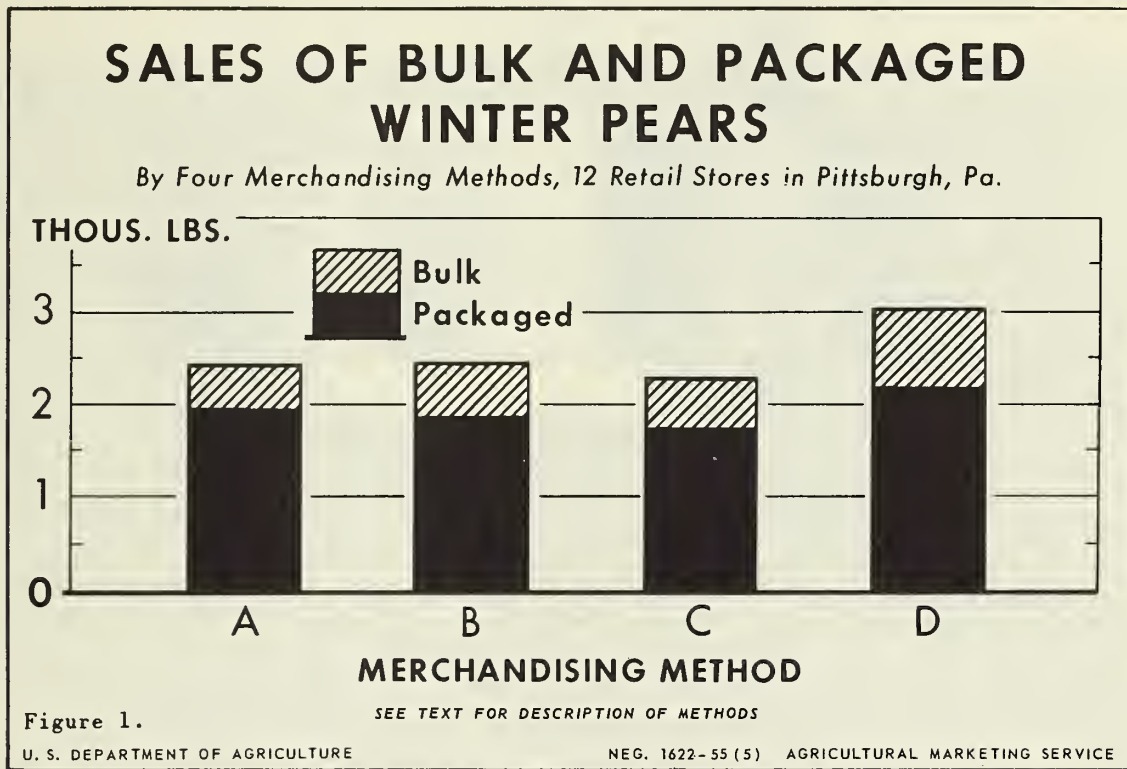
Four merchandising methods	:	Sales
	:	<u>Pounds</u>
A. Size 150, sold in bulk and in a package of 6	:	2,405
B. Size 150, sold in bulk and in packages of 6, 8, 10, and 12	:	2,450
C. Size 150, sold in bulk and in a package of 6; in combination with sizes 165 and 180, sold in bulk and in packages of 6, 8, 10, and 12	:	2,280
D. Size 150, sold in bulk and in a package of 6; in combination with sizes 80 and 90, sold in bulk and in packages of 3, 4, 6 and 8	:	2/ 3,025

1/ Includes 4 test weeks beginning February 28, 1955.

2/ The difference in average sales between this method and the other three is statistically significant at the 5 percent probability level.

## Bulk and Packaged Sales of Winter Pears

In each of the merchandising methods tested, winter pears were displayed in bulk and in packages. Of the total quantity of pears sold during the experiment, 76 percent were retailed in packages. The relationship between package and bulk sales remained relatively the same in three of the four merchandising methods tested (Figure 1, below).



Although the findings indicated that consumers were predominantly interested in winter pears in packages, this fact should not be construed to mean that the elimination of bulk displays would necessarily enhance overall sales of the fruit. In fact, such action might have the opposite effect on movement of pears at the retail level. The value of this information tends to emphasize the relative importance of packaging in developing an overall merchandising program for pears which will most nearly satisfy consumer desires.

### Sales of Winter Pears By Sizes

In the experiment, consumers were offered a choice of three different sized groupings of pears - medium alone, medium with small, and medium with large. Furthermore, the consumer was provided an opportunity to choose pears solely on the basis of size, since the price per pound and other factors were identical.

When consumers were offered a choice of large-and medium - sized pears, approximately two-thirds of the total sales were of the largest sized pears (Figure 2, top of next page).

# SALES OF WINTER PEARS BY SIZE

By Four Merchandising Methods, 12 Retail Stores in Pittsburgh, Pa.

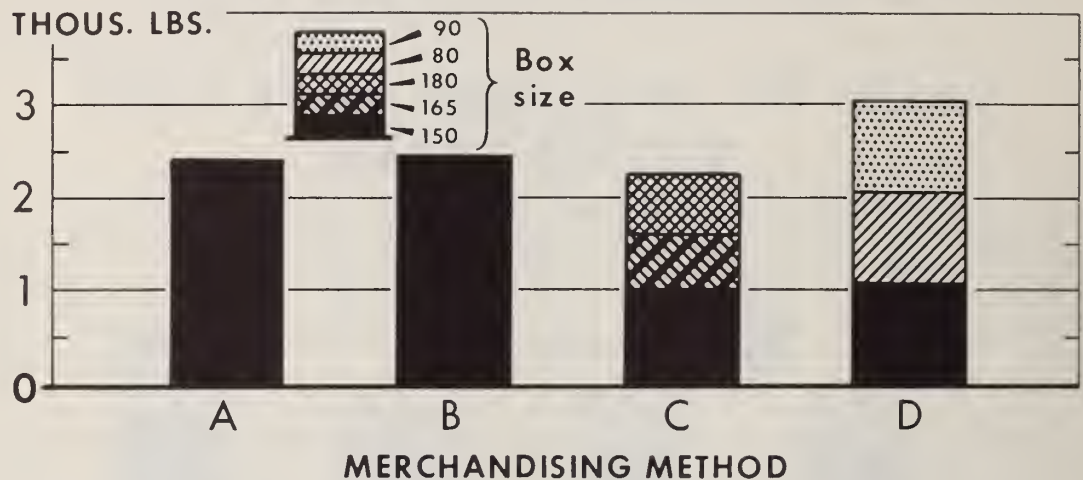


Figure 2.

SEE TEXT FOR DESCRIPTION OF METHODS

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Research results indicated that sales were greatest when the combination of medium and large sizes were offered together in the experimental displays. When medium-sized pears were displayed together with the smaller ones, consumer purchases between the medium and smaller sizes of the fruit were about the same. Consumer discernibility (as reflected in the amount of their purchases) did not appear to be too great within a relatively narrow range of winter pear sizes, but was apparent between extremes of small, medium, and large sizes. An additional noteworthy finding from this research was the indication that sales of pears were not noticeably reduced when medium and small sizes were offered in combination. The importance of this finding lies in the fact that small pears can be marketed through retail outlets without seriously impairing the overall sales of the product.

## Conclusions

Research findings demonstrated that in certain sized packages, in combination with bulk displays, small and large winter pears could be sold at retail; an item of interest both to producers, who have had trouble moving them (normally at a discount), and to retailers who have had no previous information as to whether large and small sizes would sell.

The research indicated that the merchandising program which resulted in the most sales included: (1) Displays of winter pears including a combination of small, medium and large-sized fruit. While large and medium-sized pears displayed together in both packages and bulk tended to bring about the most sales, similar displays of small and medium sizes in combination did not materially decrease overall sales. (2) Displays which

included both packaged and bulk pears. The number of pears to a package should vary according to size; that is, 6 to 8 to a package for medium sizes, 3 to 6 to a package for large sizes and 6 to 12 to a package for small sizes. Retailers should be careful about the number of packages prepared containing 10 and 12 small-sized pears since they move relatively slowly. (3) The condition of pears displayed should be such at all times that they stimulate purchases since the fruit is an "impulse item" to a majority of customers.



Here is a typical merchandising display used during the course of the study on winter pears described in the article - bulk fruit in combination with packaged pears. Note the varying count of the different sized packaged pears.

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